

Amendments to the Specification:

The amendments to the specification requested below refer to pages in the originally filed specification.

Please replace the paragraph beginning on page 7, line 22, and which begins with the following sentence, "The active agent can be for inhibiting the activity of vascular smooth muscle cells", with the following amended paragraph:

The active agent can be for inhibiting the activity of vascular smooth muscle cells. More specifically, the active agent can be aimed at inhibiting abnormal or inappropriate migration or proliferation of smooth muscle cells to prevent, inhibit, reduce, or treat restenosis. The active agent may be any substance capable of exerting a therapeutic or prophylactic effect in the practice of the present invention. Examples of such active agents include antiproliferative, antineoplastic, antiinflammatory, antiplatelet, anticoagulant, antifibrin, antithrombin, antimitotic, antibiotic, and antioxidant substances as well as combinations thereof. An example of an antiproliferative substance is actinomycin D, or derivatives and analogs thereof (manufactured by Sigma-Aldrich 1001 West Saint Paul Avenue, Milwaukee, WI 53233; or COSMEGEN available from Merck). Synonyms of actinomycin D include dactinomycin, actinomycin IV, actinomycin I₁, actinomycin X₁, and actinomycin C₁. Examples of antineoplastics include paclitaxel and docetaxel. Examples of antiplatelets, anticoagulants, antifibrins, and antithrombins include aspirin, sodium heparin, low molecular weight heparin, hirudin, argatroban, forskolin, vapiprost, prostacyclin and prostacyclin analogs, dextran, D-phe-pro-arg-chloromethylketone (synthetic antithrombin), dipyridamole, glycoprotein IIb/IIIa platelet membrane receptor antagonist, recombinant hirudin, thrombin inhibitor (available from Biogen), and 7E-3B® (an antiplatelet drug from Centocor). Examples of antimitotic agents include methotrexate, azathioprine, vincristine, vinblastine, fluorouracil, adriamycin, and mutamycin. Examples of cytostatic or antiproliferative agents include angiopeptin (a somatostatin analog

from Ibsen), angiotensin converting enzyme inhibitors such as ~~CAPTOPRIL~~ captopril (available from Squibb), ~~CILAZAPRIL~~ cilazapril (available from Hoffman-LaRoche), or ~~LISINOPRIL~~ lisinopril (available from Merck & Co., Whitehouse Station, NJ), calcium channel blockers (such as ~~Nifedipine~~ nifedipine), colchicine, fibroblast growth factor (FGF) antagonists, histamine antagonist, ~~LOVASTATIN~~ lovastatin (an inhibitor of HMG-CoA reductase, a cholesterol lowering drug from Merck & Co.), monoclonal antibodies (such as PDGF receptors), nitroprusside, phosphodiesterase inhibitors, prostaglandin inhibitor (available from Glaxoform Glaze), ~~Seraminsuramin~~ seraminsuramin (a PDGF antagonist), serotonin blockers, thioprotease inhibitors, triazolopyrimidine (a PDGF antagonist), and nitric oxide. Other therapeutic substances or agents that may be appropriate include alpha-interferon, genetically engineered epithelial cells, dexamethasone, estradiol, clobetasol propionate, cisplatin, insulin sensitizers, receptor tyrosine kinase inhibitors and carboplatin. Exposure of the composition to the active agent should not adversely alter the active agent's composition or characteristic. Accordingly, the particular active agent is selected for compatibility with any other components of the drug.

Please replace the paragraph beginning on page 10, line 5, and which begins with the following sentence, "A second use of invention ceramic components is as attachment means for at least one auxiliary component 200", with the following amended paragraph:

A second use of invention ceramic components is as attachment means for at least one auxiliary component 200. The auxiliary component 200 comprises glass, ceramic, metallic, plastic, or polymeric portions. For instance, a fiber-optic strand or fiber can serve as the auxiliary component 200. In that case, the ceramic component 120 connects the fiber-optic fiber to the surface 110 or into the attachment ~~region 115~~ region 115. Alternatively, the auxiliary component is a chip-based device, e.g. a sensor such as a physical sensor (which measures temperature, pressure, etc.) or a chemical sensor (which measures pH, drug concentration, etc.). Such an assembly allows the sensor to contact body fluids or tissues very near the medical device's implantation site.

Please replace the paragraph beginning on page 10, line 14, and which begins with the following sentence, "When the auxiliary component 200 comprises metal or a metal device, the ceramic component 120 connects the metal of the auxiliary component 200 to the surface 110," with the following amended paragraph:

When the auxiliary component 200 comprises metal or a metal device, the ceramic component 120 connects the metal of the auxiliary component 200 to the surface 110. By varying the ceramic component's composition or geometry, this connection can be made insulating or conductive. Therefore, for some embodiments a metal electrode serves as the auxiliary component 200 and attaches to the metallic surface 110 of the medical device, with the ceramic component insulating it from the metallic surface 110.

Please replace the paragraph beginning on page 13, line 11, and which begins with the following sentence, "For other metals, such as stainless steel, an oxide layer 135 is formed on the attachment region 115 surfaces," with the following amended paragraph:

For other metals, such as stainless steel, an oxide layer 135 is formed on the attachment ~~region 115~~ region 115 surfaces. This is accomplished by heating just the attachment ~~region 115~~ region 115 using a localized heating means, such as directing a laser at the surfaces or using some other localized thermal processing means as are widely employed in the art. Alternatively, the entire surface is heated. With this method, areas with undesired oxide may in some cases have the oxide removed before further processing. Fig. 7 shows an implantable medical device 100 with attachment regions 115 machined into its surface 110 after the surface 110 has been heated to form an oxide layer 135. Other methods of forming oxide layers on surfaces are

known to those of ordinary skill in the art and are considered to be within the scope of this disclosure. Other useful heating means include lasers, hydrogen furnaces, high-voltage DC arc current, etc. One of ordinary skill in the art is versed in suitable heating methods.

Please replace the paragraph beginning on page 15, line 1, and which begins with the following sentence, "Once the precursor material has been applied as required, it is converted to the ceramic component 120," with the following amended paragraph:

Once the precursor material has been applied as required, it is converted to the ceramic component 120. This conversion has several steps. In typical embodiments, the precursor material is heated to remove any binders, leaving behind the glass frit material or the networked structure from the gel. Therefore, the temperature of the precursor material should be placed within a range to remove the binders from the material at a reasonable rate without introducing unwanted changes or disruptions into the glass frit or the networked structure. This step is accomplished by heating the entire medical device or by locally heating the precursor material such as with a laser or other local heating technique. Next, the ceramic component 120 is fused to the oxide layer 135 previously deposited in the attachment ~~region 115~~ region 115, or, for surfaces not requiring an oxide layer, fused directly to the attachment ~~region 115~~ region 115 itself. In typical embodiments, fusing is accomplished with a heating step, as well. Usually fusing requires higher, but more localized temperatures. Again, the heating is accomplished by heating the entire device or by local heating. The goal here is to heat the oxide layer 135 and the adjacent area of the glass frit material so that these regions fuse. In some embodiments, heating is carried out so that the bulk of the porous region 125 remains substantially unaltered, i.e. remains porous. Thus, local heating, confined to the oxide-layer-glass-component junction, such as with a laser, is frequently selected.

Please replace the paragraph beginning on page 22, line 11, and which begins with the following sentence, "In another set of inventive embodiments, the medical device attaches to the ceramic component through an oxide layer formed on the surface of attachment regions machined into the medical device's surface," with the following amended paragraph:

In another set of inventive embodiments, the medical device attaches to the ceramic component through an oxide layer formed on the surface of attachment regions machined into the medical device's surface. The ceramic component has a second less porous region at or near where it attaches to the oxide layer and a porous region substantially throughout the remainder. This porous region is filled with a drug at some time before use. In some of these embodiments, the surface of the medical device is a metal that comprises iron, cobalt, nickel, manganese, stainless steel, tantalum, niobium, super-elastic nickel-titanium alloys, titanium, silver, gold, platinum, steel, or aluminum. In some of these embodiments, the drug contains actinomycin D, or its derivatives and analog (manufactured by Sigma-Aldrich 1001 West Saint Paul Avenue, Milwaukee, WI 53233; or COSMEGEN available from Merck) including dactinomycin, actinomycin IV, actinomycin I₁, actinomycin X₁, and actinomycin C₁; paclitaxel (e.g. TAXOL[®] by Bristol-Myers Squibb Co., Stamford, Conn.); docetaxel (e.g. ~~Taxotere~~[®] TAXOTERE[®], from Aventis S.A., Frankfurt, Germany); methotrexate; azathioprine; vincristine; vinblastine; fluorouracil; doxorubicin hydrochloride (e.g. ~~Adriamycin~~[®] ADRIAMYCIN[®] from Pharmacia & Upjohn, Peapack N.J.); mitomycin (e.g. ~~Mutamyacin~~[®] MUTAMYCIN[®] from Bristol-Myers Squibb Co., Stamford, Conn.); sodium heparin; low-molecular-weight heparins; heparinoids; hirudin; argatroban; forskolin; vapiprost; prostacyclin and prostacyclin analogues; dextran; D-phe-pro-arg-chloromethylketone (synthetic antithrombin); dipyridamole; glycoprotein IIb/IIIa platelet membrane receptor antagonist antibody; recombinant hirudin; ANGIOMAX[™] ~~Angiomax~~[™] (Biogen, Inc., Cambridge, Mass.); angiopeptin; angiotensin converting enzyme inhibitors; captopril (e.g. CAPOTEN[®] ~~Capoten~~[®] and CAPOZIDE[®] ~~Capozide~~[®] from Bristol-

Myers Squibb Co., Stamford, Conn.); cilazapril or lisinopril (e.g. ~~Prinivil~~[®] PRINIVIL[®] and ~~Prinzide~~[®] PRINZIDE[®] from Merck & Co., Inc., Whitehouse Station, NJ); calcium channel blockers (such as nifedipine); colchicines; fibroblast growth factor (FGF) antagonists; fish oil (omega 3-fatty acid); histamine antagonists; lovastatin (an inhibitor of HMG-CoA reductase, a cholesterol lowering drug, brand name ~~Mevacor~~[®] MEVACOR[®] from Merck & Co., Inc., Whitehouse Station, NJ); monoclonal antibodies (such as those specific for Platelet-Derived Growth Factor (PDGF) receptors); nitroprusside; phosphodiesterase inhibitors; prostaglandin inhibitors; suramin; serotonin blockers; steroids; thioprotease inhibitors; triazolopyrimidine (a PDGF antagonist); nitric oxide; rapamycin and its structural derivatives (Everolimus) and permirolast potassium. In some of these embodiments, the device contains a polymeric layer coated on top of the ceramic component, on a portion of the device not containing the ceramic component, or the entire device. In some of these embodiments, attachment uses a laser as a heat source.